

ABSTRACT

An adaptable filter sampling device is provided for localizing the utilized area of a filter medium. The filter sampling device of the present invention includes a filtration cassette having an inlet port, a body portion having an internal cavity, and an outlet port. Positioned within the body portion across the internal cavity is a filtration medium having a predetermined pore size for collecting particles. In addition, the filter sampling device includes an interchangeable restrictor plate made in various forms to enable its use with commercially available filter mediums and filtration cassettes. The restrictor plate includes one or more portals for directing the flow of gases or liquids through the filter sampling device. Preferably, the restrictor plate is positioned anterior and abutting the filter medium in relation to the particle exposure so that a gas or liquid is directed to a defined localized area of the filter medium. The localized area of filtration enables easier microscopic analysis of the filter medium and dramatically reduces the time required to collect and analyze a filtration sample. Moreover, the restrictor plates may have single or multiple portals. The portals may vary in size and shape or, in the case of multiple-restrictor plates, may be identical for replicate and duplicate sampling. Additionally, the portals may be specifically tailored to correspond with a particular microscope's focal views.